To Guard Panama Canal with Two Strongest Fortifications in the World

THE 16-INCH RIFLE WHICH WILL DEFEND THE CANAL AND THROW A SHELL TWENTY MILES OUT At Pacific Entrance Will Be Uncle Sam's 16-Inch Rifle, the Most Powerful on the Globe, Which Can Throw a Huge Shell Filled with Deadly Explosives Twenty Miles Out to Sea.

By William L. Altdorfer.

N all the history of the world there has but one Gibraltar-the Rock of tar-eternal guardian of the enthe Mediterranean Sea, now unntrol of England. "As strong as the

monster 16-inch rifle now feet a second. at Sandy Hook, N. J. There are only two

States for the purpose of making the fortifications there as strong as Yankee energy and ingenuity can make them.

ten years ago, but it is still the most It is well known that 14use of powerful field glasses.

Panama fortifications, to

at that time, as such an undertaking as Another interesting illustration is that

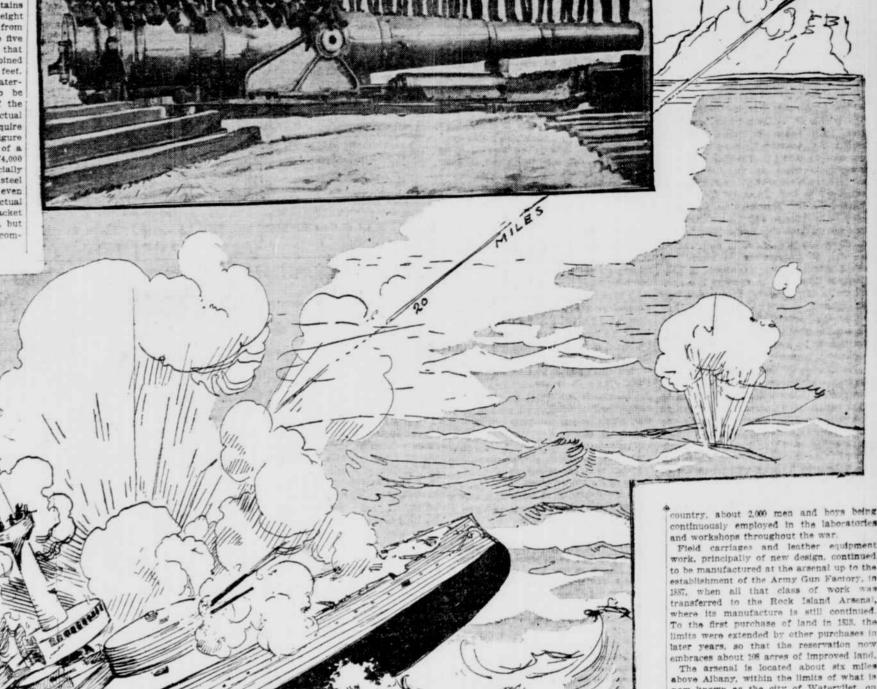
powder used. With smokeless powder it of the trajectory or curve of the shell from Gibraltar" is an expression fa-requires a charge of 576 pounds, but with the 16-inch gun is 30,516 feet, or above five every one. When Gibraltar is the old black powder a charge of 1.176 and three-quarter miles, it will be seen that be dyou know at once the strongest of dyou know at once the strongest in t or by the time the Panama pounds more than twenty miles at the ter-vilet Arsenal, the workmen had to be ears, of the sam intends to rific speed of 2,300 feet a second. This drilled in handling a dummy gun of the Canal is similarly drilled in handling a dummy gun of the different pattern, however, one at each en- that of either the French or the Italian work was commenced. It does not require the canal. And he intends to gun. For instance, the Italian gun throws a great flight of the imagination to figure stronger and a projectile weighing 2,000 pounds hardly out what is required in the handling of a weighing 1,700 pounds about the same dis-

Undoubtedly the most interesting feature other guns in the world as large as Uncle of the gun is its long range, twenty miles. Sam's big gun. One is owned by Italy A firing table prepared by Major Ingalls, and the other by France. But neither of U. S. N., shows that this range is obtain-these guns can throw a shell anything like able with a muzzle velocity of 2,300 feet a distance such a projectile can second, with the necessary angle of elevathrown with the great 16-inch rifle tion of the piece. The trajectory or curve the United States. The American gun of the shell while going through the air ows a shell as big as a man, weighing shows that in reaching this distance, the ed with the most powerful shell would reach the great height of more explosives known, a distance than 20,000 feet. This is enormously greater than the highest range obtained by any other gun in the world.

The greatest height reached by any gur In addition to the giant gun there will be previous to the construction of this gun rifles, which are only second stands to the credit of a Krupp 3.45 inch ower to the 15-inch; twelve 6-inch rifles gun, which was fired on the Meppen range nty-four 12-inch mortars, all of the in the presence of the Emperor of Ger-United States, equally distributed of this gun was found to be 22.120 yards the two Gibraitars. The Pacific or about twelve and a half miles. e canal will be the stronger of the greatest height reached by the Krupp shell time that had this gun been placed at Pré St. Didier, in the Alps, elevated to 44 de-

the Panama Canal was hardly thought of, of taking the combined height of Pike's much less in actual process of construction. Peak, in Colorado, and of Mount Blanc, the The range and energy of the giant gun combined height of the two mountains varies with the quality and amount of being 29,926 feet. As the extreme height

ed by the most powerful gun in the tance at practically the same number of jacket into place on the tube. Finally, even after the many drills, when the actual



BHELL USED IN THE 16-INCH

In equipping the Panama fortifications well defined plan in view. All military authorities claim that with 14-inch guns coast defences are more than equal to battleships with guns of the same calibre. On be elevated more effective fire can be made | the looks of the place? She does not. from the same size gun in the coast defence than from battleships. What is sought by the United States is to equin the forts with Buch powerful guns that the enemy's fleet can be kept so far away from the canal that it cannot drop shells or projectiles Into the waterway. A large projectile fired

coing damage to the waterway. This is-inch gun was the first of a series the sea coast defences of the United States

R numbers. time, reached the conclusion that eighteen of these guns should be provided for the Protection of New York, ten at San Francisco, eight at Boston and four at Hamp-Buch signific weapons were not absolutely comments to make to the uniformed lad in and the kind you would like to live in, but girls in it, he wonders at your lack of of thinking that it might have been worse. On thinking that it might have been worse, and the kind you would like to live in, but girls in it, he wonders at your lack of of thinking that it might have been worse. On the whole family?

Customer—Very nearly. The doctor is accommodations for guests. The chances would like to live in, but accommodations for guests. The chances would like to live in, but accommodations for guests. and that 14-inch guns would the marble hall. "Hear her say that she deep worse, and that 14-inch guns would the marble hall. "Hear her say that she deep worse, and that 14-inch guns would the marble hall. "Hear her say that she deep worse, and that 14-inch guns would the marble hall. "Hear her say that she deep worse, and the she would be backt" he asks. "All the three hundred can't afford. Family owners always settle accommodations for guests. The chances we have to she will h shower the purpose just as well. The rea- be back?" he asks. "All the three number of the Americans of the will have to sleep, if possible, who were held back in England by the calling yet.—Toledo Blade.

berhood of Chamounix, on the other side inches, and the powder chamber will hold of the range. This performance, great as 29,385 cubic inches. The gun's weight is it was, becomes almost insignificant com- 284,500 pounds, or about 142 tons. It is pared with the capabilities of Uncle Sam's valued at \$150,000, and it required more than

To give a graphic illustration of what this A good illustration of the great size of gun can accomplish, we will say the gun is this gun is given by comparing the 309set up at the Battery in New York. pounder Parroit rifle of 1863 and the 20-inch Pointed to the north, the gun would throw Rodman smoothbore of 1864, both used durits shell far beyond New Rochelle, on the ing the Civil War. The Rodman gun was Sound, and Tuckahoe would be easily the first one ever constructed, and is built Hamilton, N. Y., and has been dismounted of a shell, and this irregularity so deflected was made, was established in 1813 at West within range, as would be Hastings-on-the- upon the same lines as the Rodman smoothbeyond the Auantic Highlands. Keyport and Perth Amboy would be open to attack, as would Westfield and Milburn, in New in diameter, and weighs about 116,000 The 300-pounder Parrott gun was the most

reached 8,357 feet higher than Mount Blanc, and its fall would have been in the neigh- The length of the main bore is 37 feet 41/2 three years to build it.

for ten years from its carriage. There is the projectile that it became necessary to Troy, N. Y.-then known as Gibbonsvill

while the residents of Montclair pounds. It is one of the largest cast iron prominent one of the group of "Swamp ould hear the huge projectiles screaming guns ever made. It was cast at Pittsburg Angels" used in the batteries before Forts thigh overhead, to fall three miles distant in in 1884, and one other gun of the same di-the valley beyond. Paterson would be mensions was made there later. It has

This gun serves as a reminder of what at

Hudson. The zone of fire would pass bores of lesser calibres, such as the 3-inch, also the 200-pounder 19-inch Parrott rifle, chip it off even all around. To accomplish as a military establishment, principally for through Hempstead and Long Beach, on 10-inch and the 15-inch, which class of guns the only one of its calibre ever construced. this it was necessary to call for a mechanic the manufacture, storage and preservation Long Island, and its shells would pass far were employed in our seacoast defences. This gun is like the other Parrott rifles. who would volunteer to sit astride the gun, of field, siege and seacoast carriages, and above Staten Island and fall half a mile during and for many years after the war. which were in general service during the within easy range of the enemy's batteries, equi; ments used for mechanical manœuvres, and to do the work under a constant fire of During the Civil War large substantial artillery and sharpshooters, night and day. buildings were erected east of the canal for but the work was successfully accompished. additional manufacturing and storage purthat time-1963-was regarded as "an enor-

poses to meet the increased demands of the during that period the arsenal ranked as ne valley beyond. Paterson would be arread and never been at any other post than Fort carried away by the premature explosion. Watervillet Arsenal, where the big gun the leading and most important one in the



the west bank of the Hudson River. The name was changed from West Troy Watervilet by an act of the State Legis-Preliminary to fortifying the canal, the islands of Naos, Flamenco, Culebra and Perice, in the Pacific Ocean, near the westcently acquired by this government. United States virtually owned half of the islands already, as a half interest was the property of the Panama Railroad, all the stock of which is owned by Uncle Sam. The other half was purchased from the

tion, using tugs and lighters to transfer passengers and freight to Bilboa, which has been accessible to ocean-going vessels

The purchase was made estensibly for the purpose of using the islands, by

for the last five years.

6 40 POUNTS

The Moving Fever Is Now Epidemic Among Flat Dwellers

is similar to a miniature earthquake and is taking his primer lessons on the corwould probably destroy a small city. net, and through the parted curtains across Department refuse to make even an estielevator and she distinctly remembers that the advertisement said it ran all night One doesn't have to be clever to see that the army board on fortifications had a under such circumstances any one trying to sleep in there would have insomnia for a constant roommate. Thus does she weigh the evidence for the apartment and find it sadly wanting.

But does she come right straight out and and the higher angle to which guns can say to the janitor that she doesn't care for "What," she asks, "Is the rent of this?"

"One thousand dollars a year." "It is very reasonable for the moneyquite a bargain in fact. Seven rooms, too!"

"Then you will take it, ma'am?" can't do anything definite until I see my husband, of course. He will be home late this afternoon, according to his of the locks or dams might close up the usual custom, and perhaps we will come takal for a year or more. The forces on back and go over it again together. Ill pipe. It isn't that the grasping venders of the canal more decision ice have paid to have this done but because the canal must keep the enemy not only call you up and let you know our decision. from reducing the fortifications but from You'd better give me the tel phone number. Ah, thank you—we doubtless will be back kitchen where it could possibly be put. to go over it together and really I like the Mrs. Harlem drags herself home that

makes the following remark to her inner following the Reno affair. Out of it all she the place. board, which had the whole subject of sea coast defences under consideration at that set of standing-room closets! How do they have the nerve to ask it-it's an old house at that! I wouldn't give them \$40 a month for it if they paid for the electric lights and flat, to wit and viz.

kept me in groceries." comments to make to the uniformed lad in can afford to rent and wouldn't live in;

passed through the armor plate the 150 that comes from the petrol livery and off with a pair of planked old shoes for same place. bounds of explosives it contains will be boarding stable would rival the music made tration of the terrific power of one of Furthermore there come strains from the tration of the terrific power of one of the terrific power of the te these shells it is claimed the detonation unhappy instrument of some neighbor who

overwhelmed with the ingenuuousness overlooking the highly advertised Hudson.

of the modern flat architect in taking a lot about as large as a counterpane and Persons who visit us from Europe can't

When she gets clear of the lobby she self, as they said of the late J. J. Jeffries

the janitor also has a few postscriptical hattan apartment; there is the kind you pay back that visit of the summer before distracting sounds of the yearly upheaval.

them was ever to call me on the 'phone the ing up the bold front, she takes a flat that shock of the surprise would knock me clear she can't afford. One thing is certain—she that are as liable to the slings and arrows this universal October shuffle, and, of teen at an extreme range of fifteen or sixteen miles the projectile will penetrate the

Firstly there is a garage in the rear, and

of outrageous fortune as a four-year-old from her again I'll eat your last season's

and say they think it's a bum set of rooms has infected the people and they are busy would happen to a battleship if the way she detects the sinister glint of a think around the block to get what would happen to a battleship if the way she detects the sinister gill of a this having to think around the block to get to other temporary homes. The same im-Imagination. In fact, the destructive bound of the shell is so great that the larger than the larger than the larger than the larger to itself while at work. Also the premier to itself while at work also the premier to itself while at work. Also the premier to itself while at work also the premier to itself while at work. Also the premier to itself while at work also the premier to itself while at work. Also the premier to itself while at work also the premier to itself while at work. which nestles beneath his jaunty pill box ter, and there is always an army that puts cap with the brass braid. So Mrs. Harlem its furniture in storage to take apartments proceeds on the heart breaking chase. She at the Plaza or the St. Regis, while anhappens to think that they have been other force large enough to balance it debuilding a whole raft of new ones cides that hotel life is nix, and they want here lately and so she looks at those a little hearthstone of their own on the She emerges some minutes later tenth floor of some mountain range of flais,

> building on it tiers of seven room flats, get it through their heads why a million-She observes that the oncoming styles in aire should live at a hotel. With them a flats seem to call for still smaller rooms hotel is a place to drop into now and then and narrower halls. There are really some for dinner or tea. They would never think marvels in space skimping kitchens and of being without a home of their own in kitchenettes. In some of these vest pocket which to entertain and maintain a horde of cooking plants the two burner gas range is burglarious servants. There is something on a hinge that allows one to flop it up out to be explained in that many Americans of the way after the meal is prepared; the prefer to take up a permanent address a refrigerator is set right next a hot water some hotel with an 18-karat lobby, where the chairs are filled with self-invited ice have paid to have this done, but because guests, who stare at diners as though it were a show specially prepared for them, and where every now and then a party of sightseers wanders wide-eyed through the forest of marble, listening to their New

York cousin as he barks of the wonders of He has a house with twelve or thirteen trouble, for the hallways are clustered with rooms, among them a couple of ever-ready furniture and the movers thereof, while Chicago Record-Herald. guest chambers. When he comes down to through your vibrating windows come the

sal vans are abroad in the land, and to- lie around if we didn't want to travel over off shore. Canal engineers also assert that morrow is their great festival.

tells you that he has come to occupy whether you intend to allow him that are moved to an elevator apartment. privilege or not. Halls will be filled with bird's-eye maple dresser bounces down the steps from the sixth floor. Next door the plane that is being let down from my little man?" asked the kind old lady. the third story window goes through the orthodox ordeal or breaking its rope and

Back in the rear the rival gangs are the elevator, which doesn't add anything Times.

to the chances that your dining room table will come out intact. Out on the curb others are pitching your gold parlor furniture about and carefully nicking off These oversea visitors aren't the only accidental bits of the finish to see whether ones puzzled by our modes of life. There it's the real thing or not. If you aren't or to take in a fast show, with plenty of Still, you have the questionable consolation

heaviest armor plate on the largest batfurthermore it seems to be a rookery for plate on the largest bat- furthermore it seems to be a roosery for all there is no reason why she should turn automobile. No one without an inborn could prevent their being on hand when the After the projectile has fly-by-night taxicabs. Even now the noise straw hat without salt or pepper, and finish eccentric and stick a couple of years in the taste for mechanics and a diploma from a motion day came. Now, many of them will applied old shoes for At that they are a welcome improvement and their furniture-filled flat will be there she don't mean what she's saying, and I rends the city at this time every year is on the old style of folding bed, that had to greet the new tenant when he shows up an uncomfortable habit of closing up with- with a caravan of loaded vans in his wake. POWDER CHARGE USED IN THE out warning while the visitor was asleep | Just the same October the First has its and stiffing him like a mechanical Othello. Virtues. When mankind lived in houses, The relatives of such guests always had an oh, many, many years ago, they acquired a annoying habit of considering such acci- habit of giving their homes a thorough series of connecting embankments to form dents in the light of breaches of etiquette. cleaning once a year. The October and a great breakwater for the Pacific end of As a matter of fact it was only one of the May moving days have taken the place of the "big ditch." The embankment, from many dangers attendant upon everyday flat this once dreaded event. Now, instead of the mainland to Naos, begun three years giving the old home flat a thorough clean- ago, is nearly ready. But for these em-But you'd better put down the newspaper ing, we move. We also take occasion then bankments, it is asserted, the canal outlet and finish your packing. To-morrow is the to get rid of all the old clothes and other would be menaced with great danger in day, you know! Already a crowd of colos- accumulated junk that we might allow to case of storms, due to the heavy currents to the new place as light as possible.

> there will be the urgent ring at the bell, women hanging from neighboring windows. quantities. On good authority, however, it and you will hide your lavender pajamas People will finally quit calling for the is said that the islands will serve as the behind the door, while your sleepy and family that just moved out, and you will site for forts to protect the canal. protruding face listens to a big man, who have broken yourself of getting off at the old subway station and climbing the old to make the fortifications at Panama secyour flat and to ask in a pointed manner five flights before you remember that you ond to none in the world, and to have a F. S. TISDALE.

FRACTIONS.

"And have you any brothers and sisters, one sister and one and a half brothers.

'What?' "Yes, ma'am; two half-sisters and three fighting hilariously for the supremacy of half-brothers."-The Catholic Standard and

TRYING TO SAVE HIS LIFE. "I've decided to buy either an automobile to form the Panama garrison and construct or a motor boat. Which would you advise the canal fortifications as quickly as pos-

"If you live near the water get an autois the relative who lives in the country. going to move you can't quite escape mobile. If you are located far from the harmony before the canal is opened to the water get a motor boat, by all means."-

ALMOST.

Grocer-Did that watermelon I sold you

16-INCH RIFLE.

these currents would have had the further The usual happy and diverting incidents Well, in a few weeks you will have be-drawback of filling in the canal mouth will illuminate the day. Before you get up come acclimated to the new bunch of with the sediment they carry in large

> In line with the policy of the government sufficient number of men on the isthmus to repel any invasion either by land or sea, orders already have been issued for the mobilization of a military force on the isthmus. The entire 10th Infantry, consisting of nearly a thousand men, commanded by Colonel Henry A. Greene, was recently ordered from San Antonio, Canal Zone as its permanent station. They will be stationed near the Pacific entrance of the waterway, where a number of buildings formerly used by the Canal Commission have been made available as quarters for the soldiers. The government expects sible, in order that everything relating to the military may be working in perfect commerce of the world. Ultimately it is planned to establish a brigade on the Canal Zone. The regiment already sent there will be augmented as fast as the Canal Commission can relinquish additional buildings which may be converted into quarters for

the use of the soldiers. (Copyright, 1911, by William L. Altdorfer.)